



U.S. Department of Veterans Affairs

Veterans Health Administration  
Boston Healthcare System

## News Release

VA Boston Healthcare System  
1400 VFW Parkway  
West Roxbury, MA 02132  
Contact: Kyle Toto  
617-435-4372  
[Kyle.Toto@va.gov](mailto:Kyle.Toto@va.gov)

### FOR IMMEDIATE RELEASE

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## Patient Masking and Increased Testing in Addition to Vaccination May Mitigate Transmission of Delta Variant in a Hospital Setting

BOSTON – A paper released on medRxiv Tuesday studying individuals diagnosed with breakthrough infections at the VA Boston Healthcare System from March 11 to July 31, 2021, showed that viral load was roughly 1,000 times higher for the Delta variant than for earlier variants, which may have resulted in transmission of the Delta variant AY.3 sublineage among vaccinated inpatients.

“This is a small sample, so further research is needed, but it’s clear that vaccination alone did not fully prevent transmission of the Delta variant among inpatients,” said co-lead author Dr. Katherine Linsenmeyer, hospital epidemiologist with the VA Boston HCS, and assistant professor of infectious diseases at Boston University School of Medicine.

Transmission of the Delta variant occurred in just one of 168 masked staff who were exposed directly or indirectly to unmasked infected patients. This finding suggests that masking may have prevented transmission from infected patients to staff, despite the very high viral load, and that greater adherence to masking among patients may mitigate the spread of the Delta variant in a hospital setting.

The study findings also suggest that a single admission polymerase chain reaction, or PCR, test may not be sufficient to detect infection resulting from preadmission exposure to highly transmissible variants. As a result, the VA Boston HCS is now conducting PCR testing upon admission and again 72 hours postadmission.

“We want to be clear that vaccination is incredibly important,” said co-lead author Dr. Kalpana Gupta, associate chief of staff and chief of infectious diseases for the VA Boston HCS, and professor of medicine at Boston University School of Medicine. “Vaccination decreases the probability of infection with the Delta variant and greatly reduces the severity of disease, which is particularly important in an inpatient setting where there are vulnerable patients with other acute medical conditions. Our results suggest, however, that additional precautions may be needed to mitigate transmission of the Delta variant in a hospital setting.”

Dr. Michael Charness, chief medical officer for VA Boston HCS, and professor of neurology and associate dean at Harvard Medical School and Boston University School of Medicine, was senior author on the paper. Rebecca Madjarov, VA Boston HCS physician assistant, was co-author. The project would not have been possible without the supporting efforts of the VA Boston HCS Nursing Service, Laboratory, Infection Prevention, Occupational Health, and Testing teams. The paper is available at <https://medrxiv.org/cgi/content/short/2021.08.05.21261562v1>.